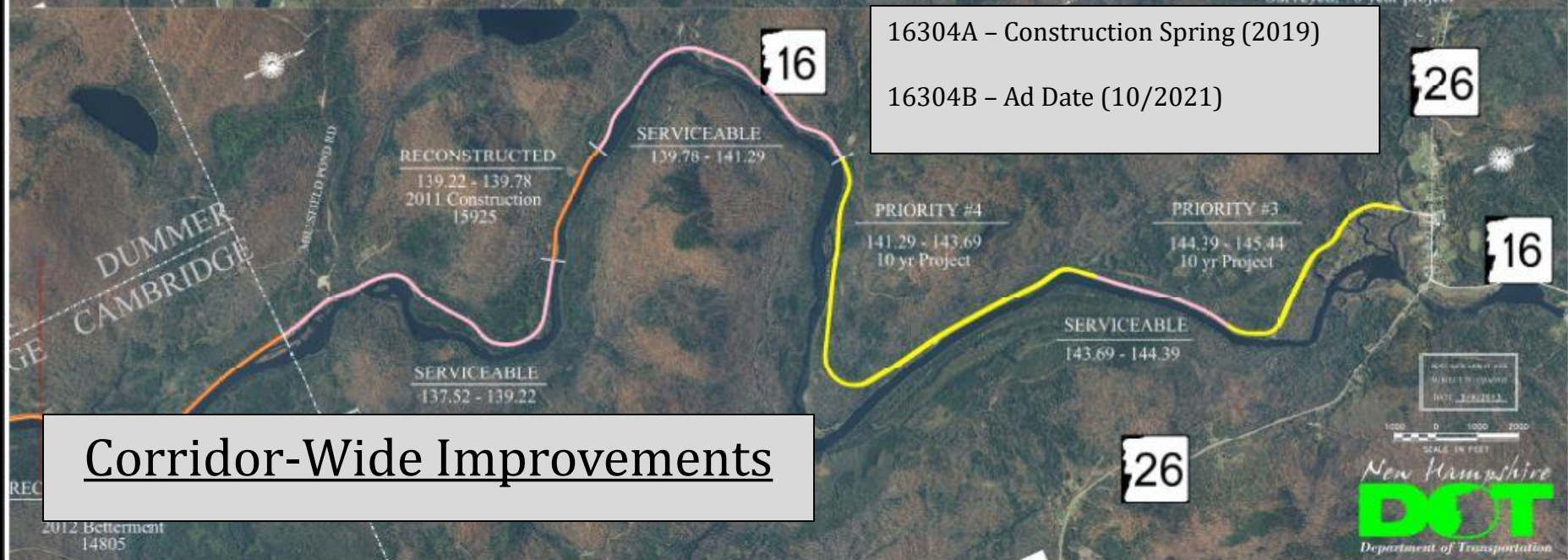


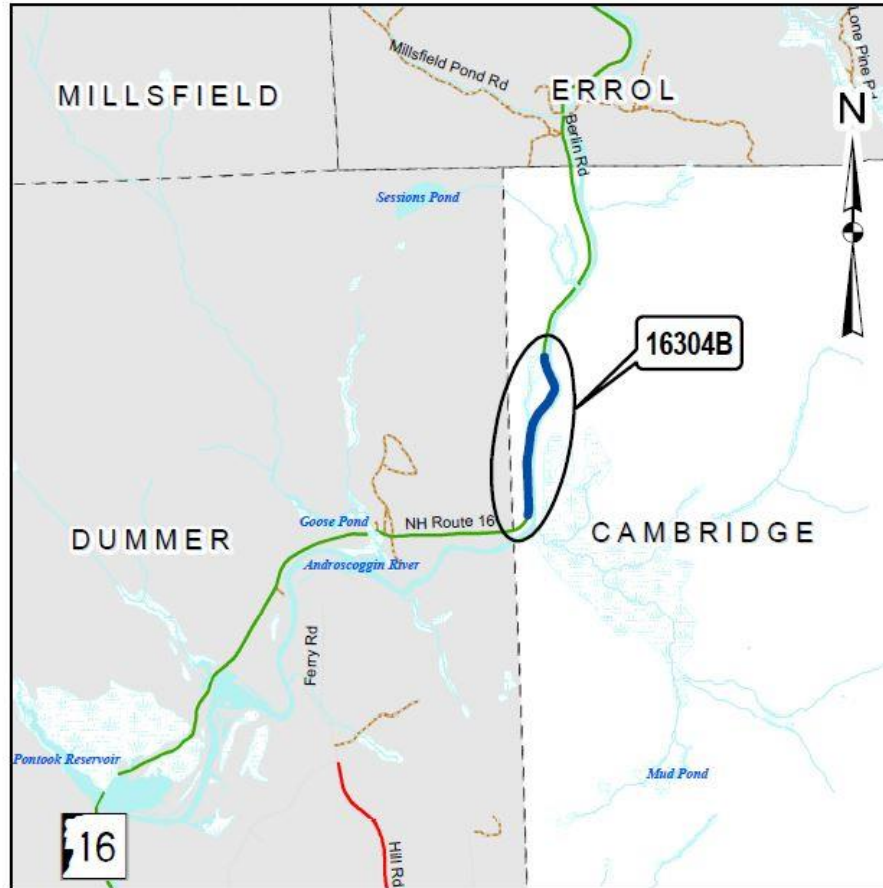


Dummer-Cambridge-Errol 16304B



Corridor-Wide Improvements

DUMMER-CAMBRIDGE-ERROL - ROUTE 16



1 1/2 0 1 2 Miles

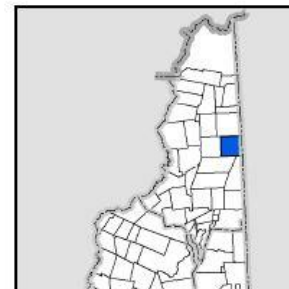
LEGEND

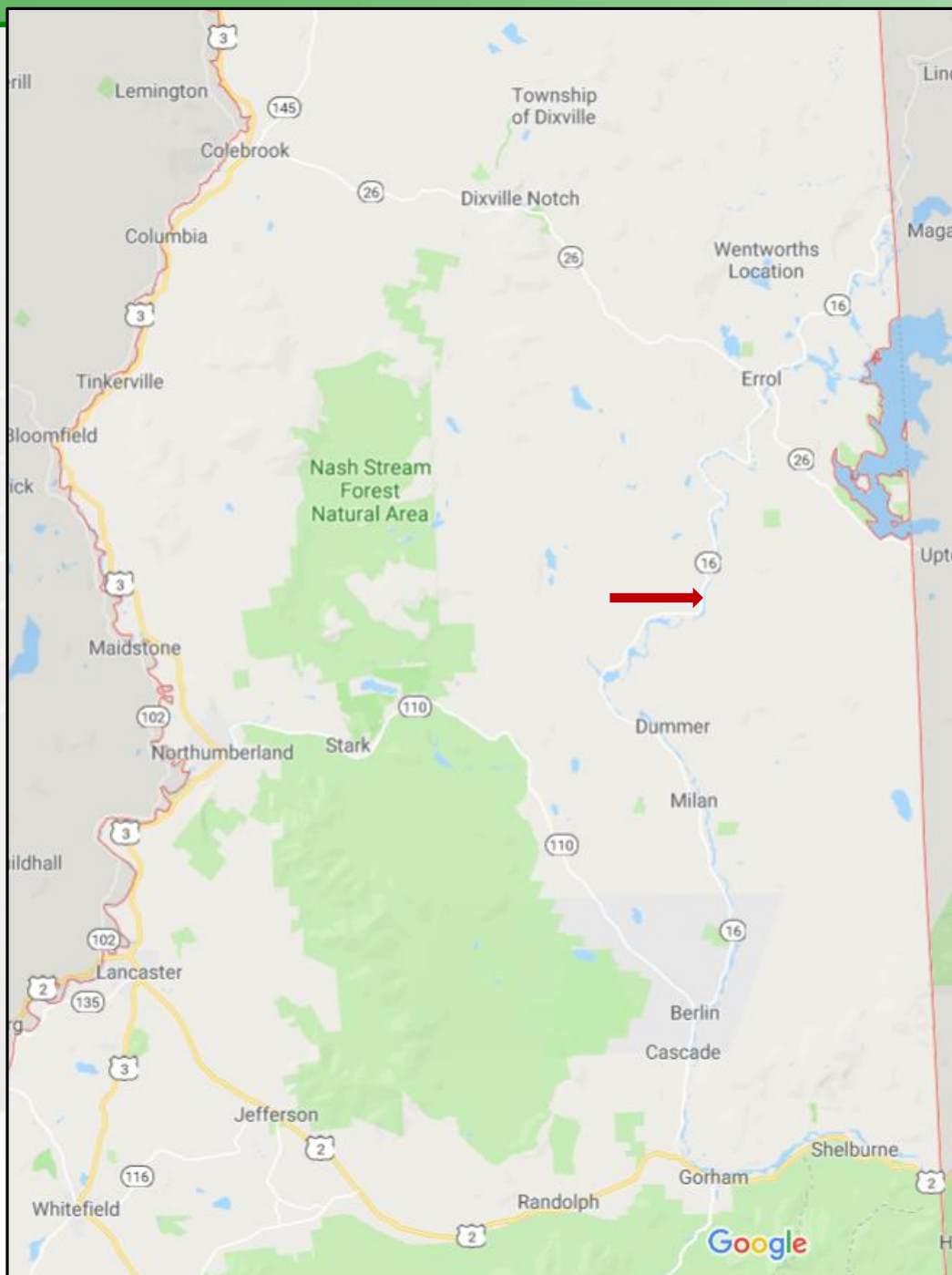
- Streams
- Water Bodies
- US Routes
- State Routes
- Interstates
- Local Roads
- Town Boundary

New Hampshire
DOT
Department of Transportation

State #: 16304B
Federal #: X-A004 (699)

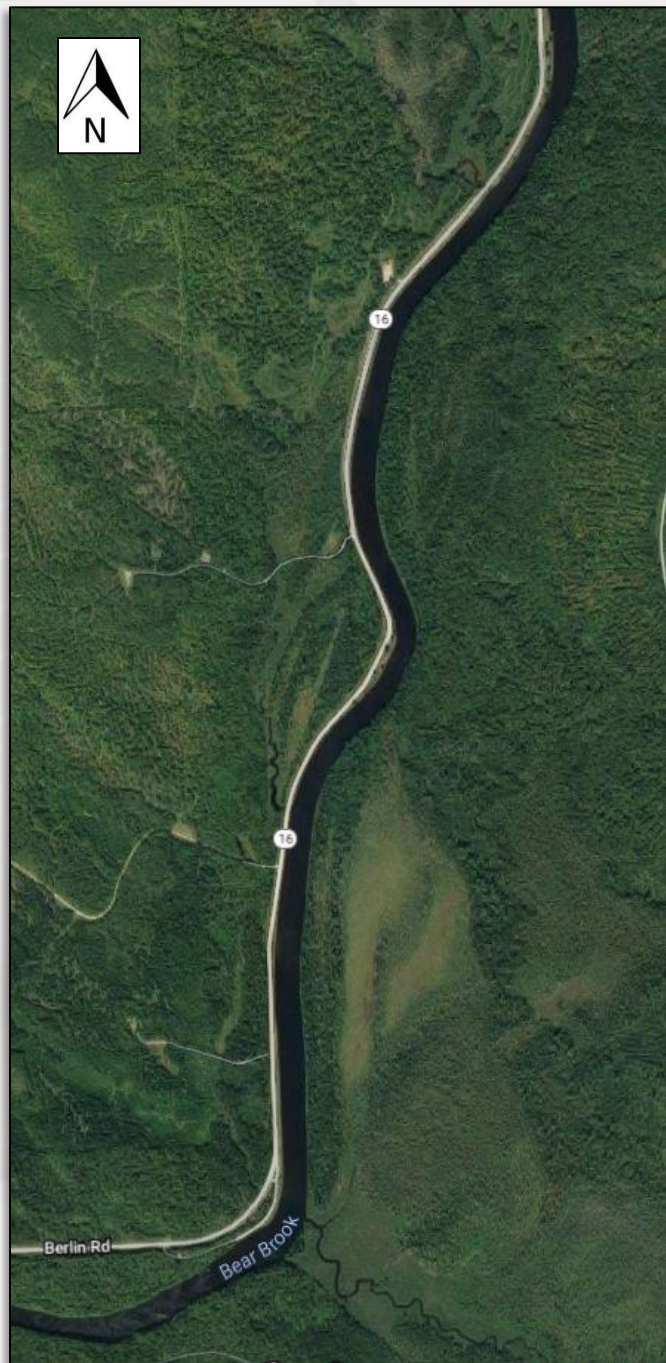
LOCATION MAP





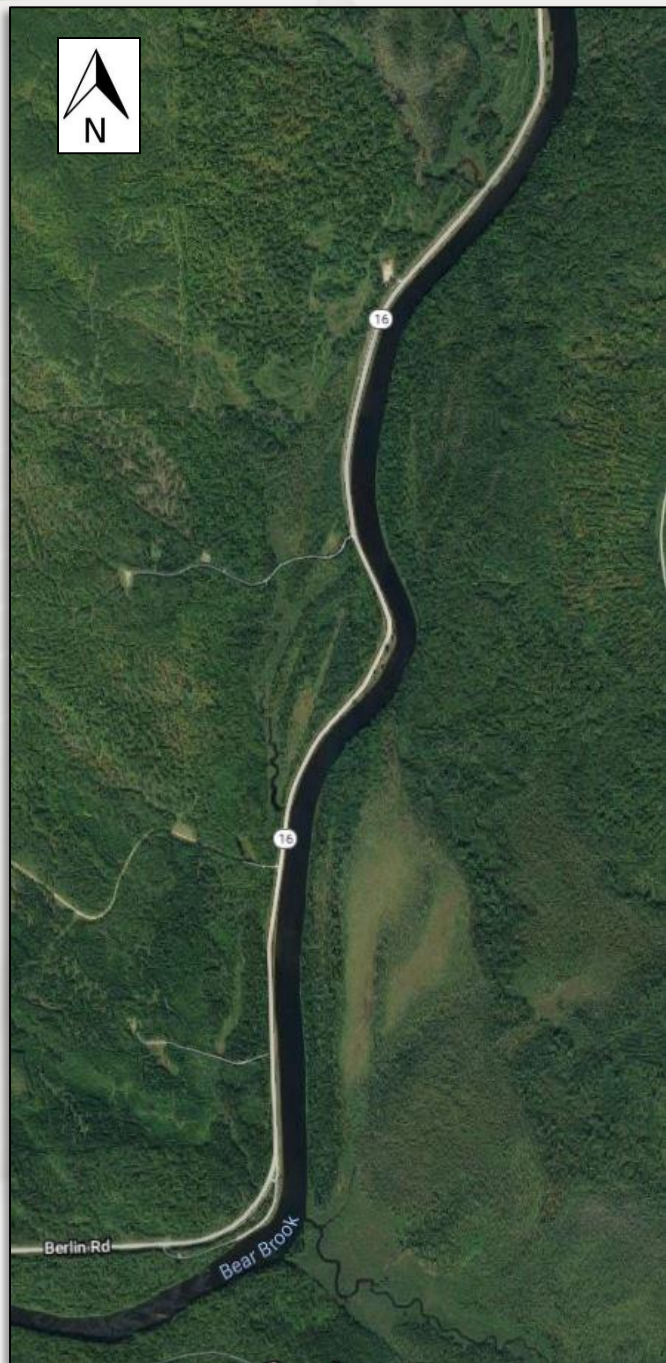
NH Route 16

- NH Route 16 is one of two major north-south corridors in the North Country.
- Critical economic link: Tourism, outdoor recreation, logging, manufacturing, and other economically vital industries rely on NH Route 16 on a daily basis, as do local residents, with most commuting to jobs located to the south in Berlin and Gorham.
- The 2015 Regional Transportation Plan identifies NH Route 16 as a priority in the Berlin-Gorham socioeconomic center.



NH Route 16 - Existing

- Minor Rural Arterial (Class I Highway)
- Posted speed: 50mph
- 1,240 ADT (2018) – 14% trucks
- Current Typical: 11-12' travel lanes, 1-2' shoulders
- CAROW - 75' Offset
- Scenic easement – 11.4 miles, 125' from CAROW to west, to edge of river to the east



16304B – Project Purpose

The purpose of the project is to address the poor condition of the pavement and road base and provide a sustainable roadway that maintains the connectivity of the corridor, minimizes long-term maintenance and risk resulting from the proximity of the Androscoggin River, and preserves the scenic quality of the surrounding area.

16304B – Project Need

1. Maintaining NH16 as a safe, reliable, continuous corridor is essential to this region of the State.
2. Pavement is in poor condition. This section of road was never formally constructed and has no structural base. Influence of river on road bed leads to severe frost heaving.
3. Due to poor condition of road, DOT posts seasonal weight restrictions for approximately 2 months of every year, requiring lengthy detours for trucks.
4. Slopes in this area have history of instability. Evidence of slope instability has been observed within project area.



16304B – Design Constraints

1. Maintenance of traffic during construction
2. Resources throughout entire project area: wetlands, river, floodplain, conservation land
3. Limited areas for stormwater treatment
4. Aesthetic concerns due to scenic easement



Existing Conditions



Typical Roadway Section

Existing Conditions



Typical Bank Section

Bank Instability



Resources

Wetlands and Surface Waters

- Extensive wetlands to west
- Androscoggin River to east
- Tributaries:
 - Tier 2 crossings (1)
 - Tier 1 crossing (1)
- Floodway/100-Yr floodplain
- Protected Shoreland



Resources

Species of Concern

- State listed plant on other side of river
- NHFG: Wild brook trout, slimy sculpin are likely in tributaries
- Within the range of federally listed species: northern long-eared bat, Canada lynx
- River is EFH for Atlantic salmon

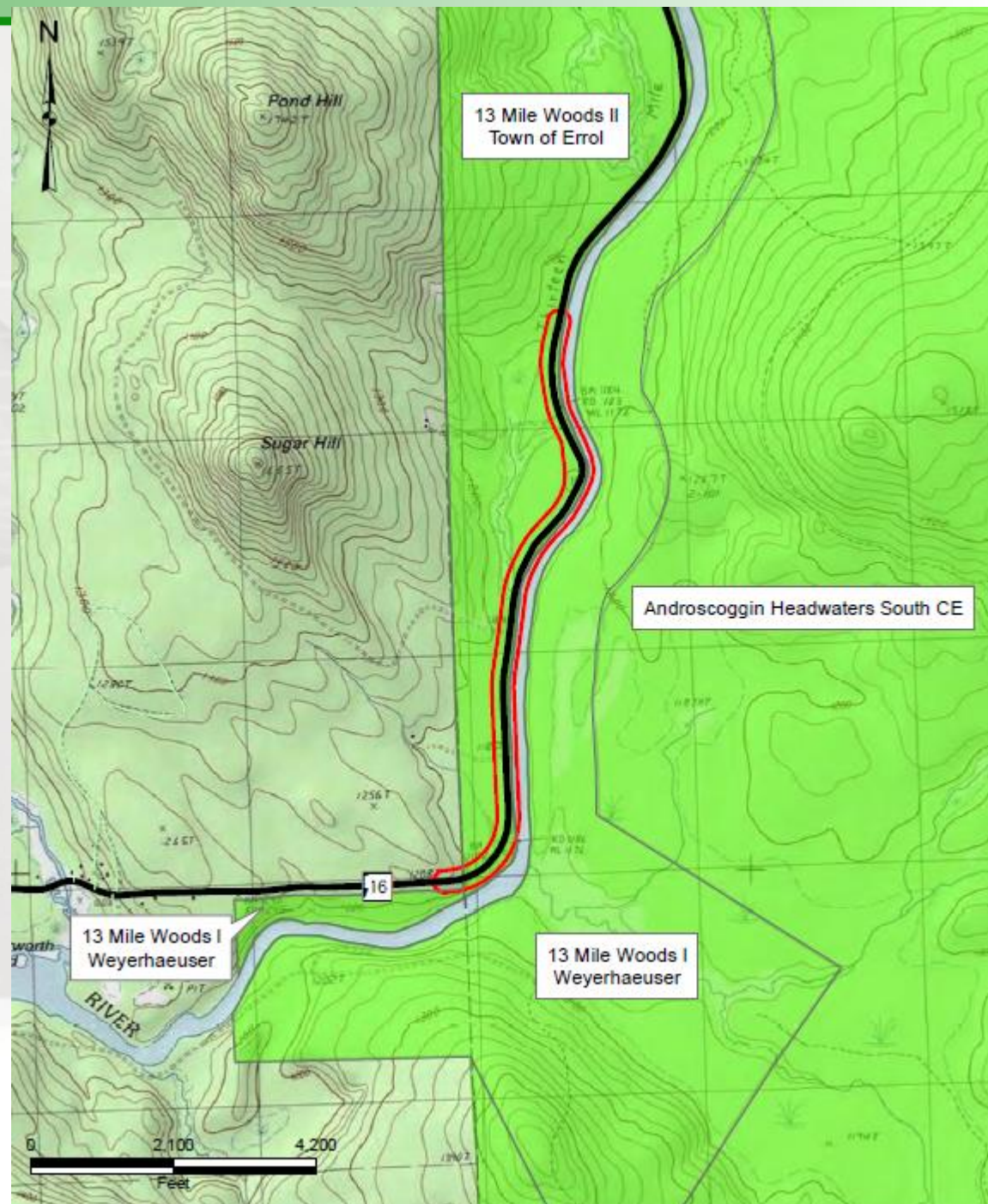


Resources

Conservation Lands

13 Mile Woods Community Forest

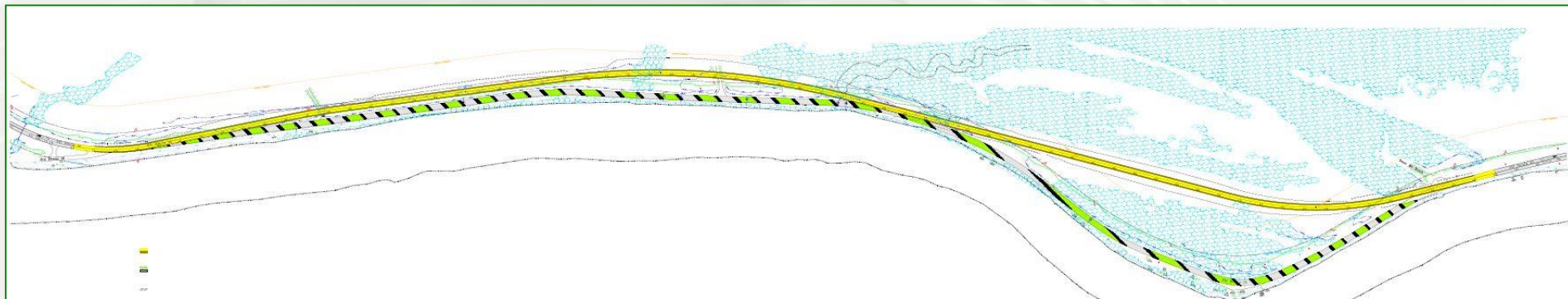
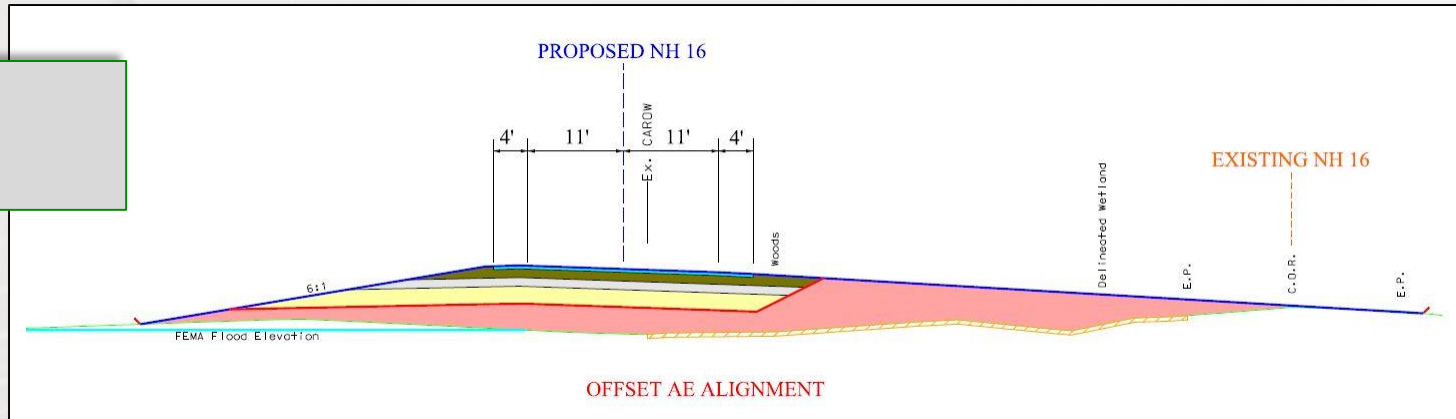
- 7,100 ac multi-use forest
- LCHIP and Forest Legacy Grants
- Owned and managed by Town of Errol



16304B Alternatives – Offline AE Alignment

CONCEPTUAL

11-4 TYP
4:1 - 6:1 SLOPES (OR Flat)
NO GUARDRAIL



BENEFITS

NO RIVER IMPACT
FULL BOX W/ DRAINAGE
ROAD MOVED BYEOND INFLUENCE OF RIVER
AOT MET

CONCERNS

MINOR EXCAVATION REQUIRED
MINOR TRAFFIC CONTROL REQUIRED

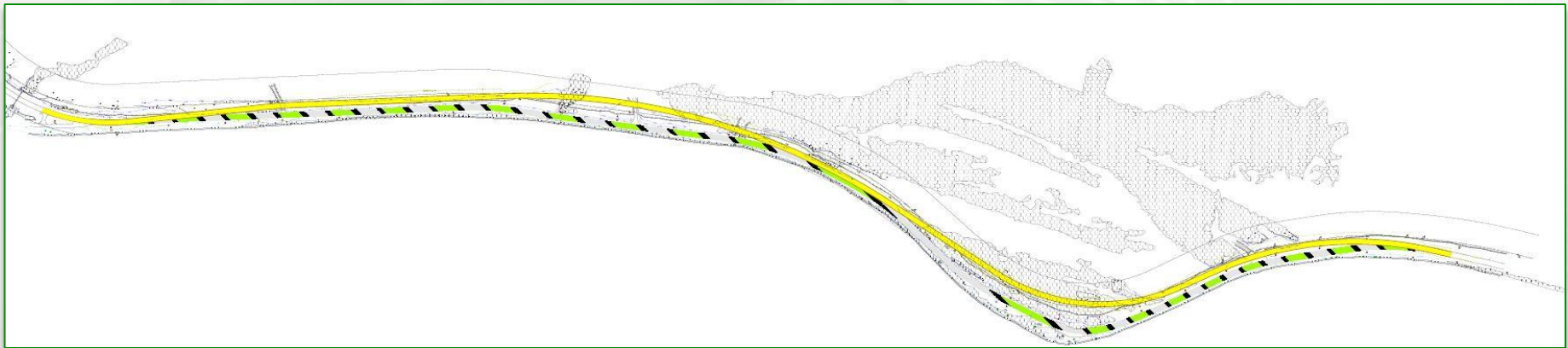
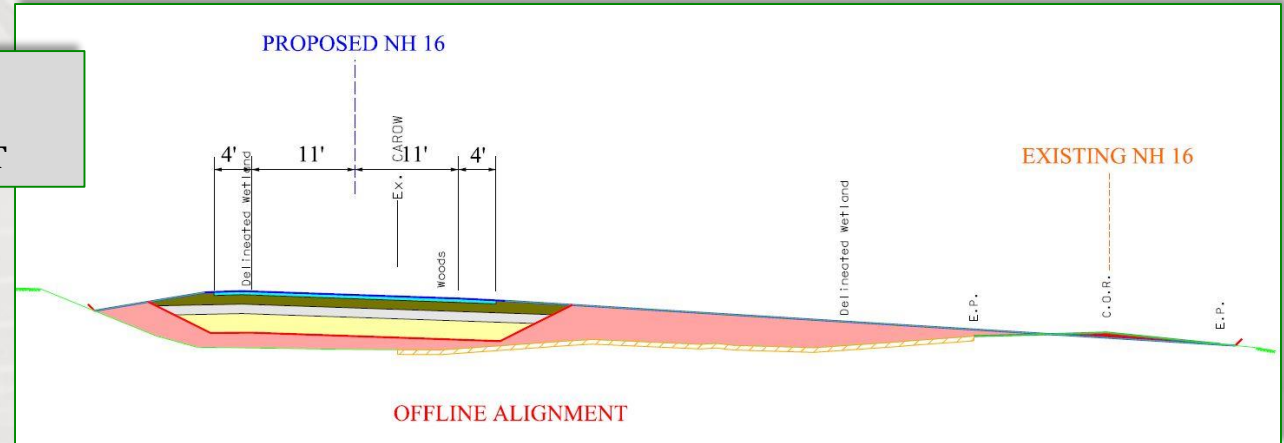
IMPACTS

WETLAND/STREAM IMPACT: 5.26 ACRES
FLOODPLAIN IMPACT : 1450 CY
ROW REQUIRED: 11.0 ACRES

NH Route 16 Alternatives – Offline Alignment

CONCEPTUAL

11-4 TYP
4:1 - 6:1 SLOPES (OR Flatter)
MINIMAL GUARDRAIL-500 FT



BENEFITS

NO RIVER IMPACT
FULL BOX W/DRAINAGE
AOT MET
ROAD MOVED BEYOND INFLUENCE OF RIVER

CONCERNS

MUCK EXCAVATION REQUIRED
MINOR TRAFFIC CONTROL

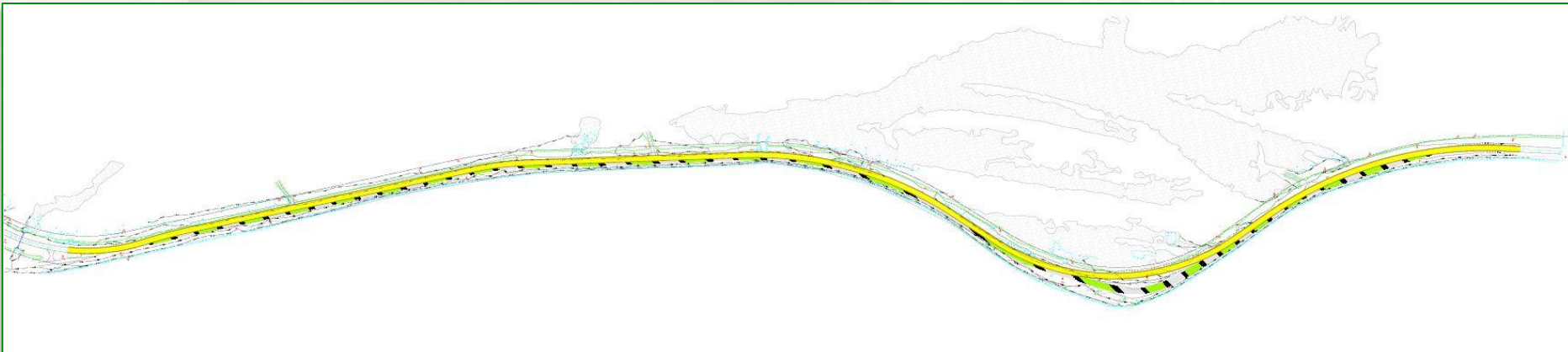
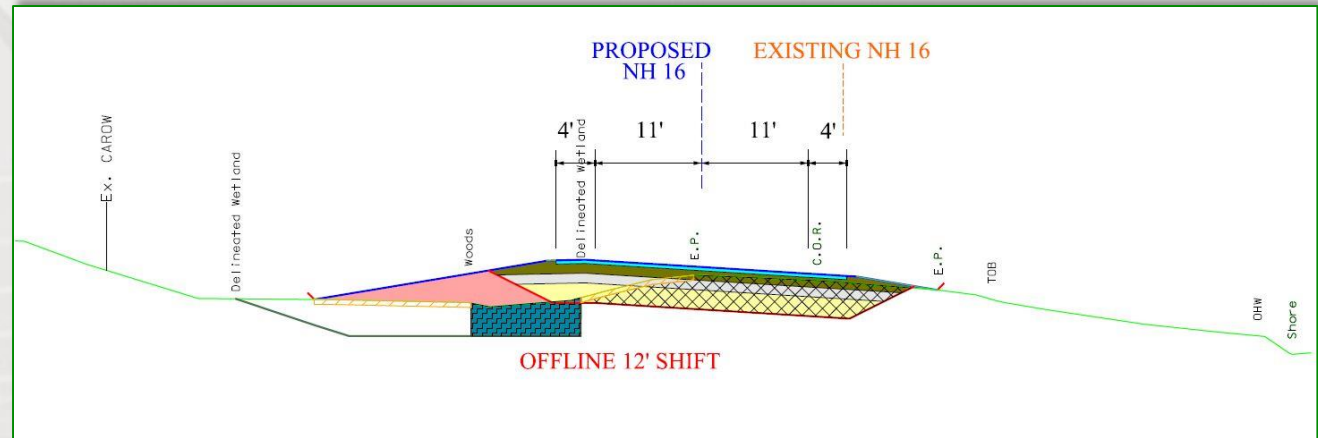
IMPACTS

RIVER BANK IMPACT: 241 LF
WETLAND/STREAM IMPACT: 6.13 ACRES
FLOODPLAIN IMPACT: 4450 CY
ROW REQUIRED: 9.71 ACRES

NH Route 16 Alternatives – Shift Alignment

CONCEPTUAL

11-4 TYP
2:1 - 6:1 SLOPES
MINIMAL GUARDRAIL-500 FT



BENEFITS

FULL BOX W/LIMITED DRAINAGE
MINIMAL MUCK EXCAVATION

CONCERNS

AOT NOT MET - NO TREATMENT POSSIBLE
FUTURE BANK STABILIZATION MAY BE NEEDED
POTENTIAL FLOODWAY IMPACT
TRAFFIC CONTROL ISSUES

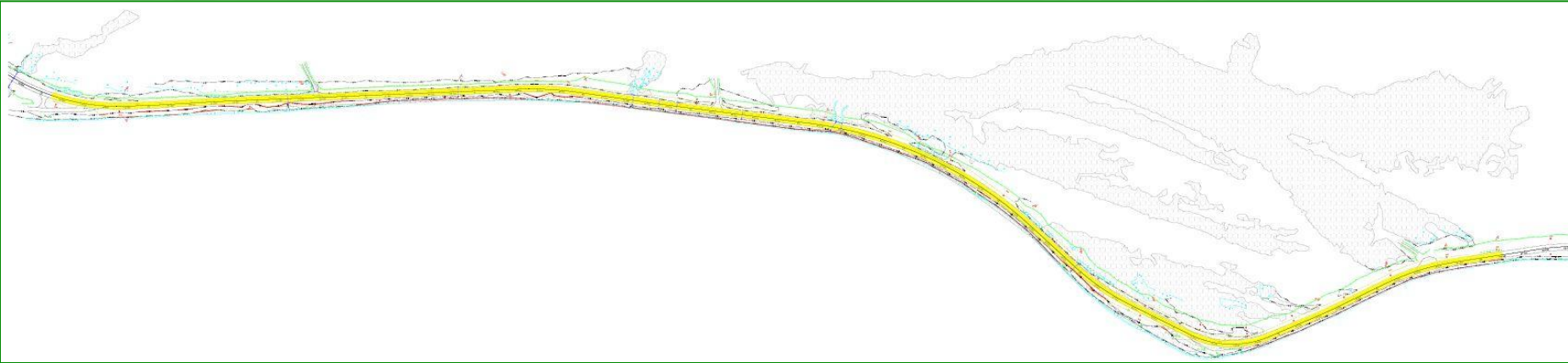
IMPACTS

RIVER BANK/CHANNEL IMPACTS:
971 LF/899 LF
WETLAND/STREAM IMPACT: 2.43 ACRES
FLOODPLAIN IMPACT: 2560 CY
ROW REQUIRED: NONE

CONCEPTUAL

The diagram illustrates a cross-section of a proposed road project. Key features include:

- PROPOSED NH 16:** Indicated by a blue line and text.
- EXISTING NH 16:** Indicated by an orange line and text.
- Dimensions:** Horizontal distances are marked as 4', 11', 11', and 4'.
- Labels:** "Delineated Wetland" is shown on the left side. "C.O.R." (Center of Road) is marked at the center. "E.P." (Edge of Pavement) is marked on either side of the C.O.R. "TOB" (Top of Bank) is marked on the right side. "GHW" (Ground Water) is indicated at the bottom right.
- Grades:** Slopes are indicated as 4:1 on the left and 2:1 on the right.
- Other Labels:** "Ex. C.A.R.O.W." (Existing Centerline of Right-of-Way) is shown on the far left.



MINIMAL MUCK EXCAVATION

LIMITED BOX W/ CROSS DRAINAGE ONLY
AOT NOT MET - NO TREATMENT POSSIBLE
BANK STABILIZATION NEEDED
FLOODWAY IMPACT
FUTURE ROADWAY IMPROVEMENTS MAY BE
NEEDED
MAJOR TRAFFIC CONTROL ISSUES

RIVER BANK/CHANNEL IMPACT:
6190 LF/4667 LF
WETLAND/STREAM IMPACT: 1.2 ACRES
FLOODPLAIN IMPACT: 2970 CY
ROW REQUIRED: NONE

NH Route 16 Alternatives - Summary

CONCEPTUAL

	Offline AE	Offline	Lane Shift	Online
River	No impact	241 LF Bank	971 LF Bank 899 LF Channel	6190 LF Bank 4667 LF Channel
Wetlands and Tributaries	5.26 ac (634 LF)	6.13 ac (643 LF)	2.43 ac	1.20 ac
Floodplain	1450 CY	4450 CY	2560 CY	2970 CY
Floodway	No impact	No impact	Impact	Impact
13 Mile Woods	11.0 ac	9.71 ac	None	None
Stormwater treatment	Full treatment	Full treatment	No treatment possible	No treatment possible
Traffic Control (Construction)	No concerns	No concerns	Concerns with maintaining one lane of traffic	Concerns with maintaining any traffic
Cost	\$5.6 million	\$5.6 million	\$4.8 million	\$6.8 million

Schedule

TENTATIVE DATES:

- Public Informational Meeting: August 2019
- Public Hearing: 2020
- Advertising Date: October 2021